QUANTA

QL USERS AND TINKERERS ASSOCIATION

Vol. 29 Iss. 5

Bumper Q&A on Q-emuLator software

QUANTA 2013, what do you want to see in the mag?

New software in the making, the QL 3D Game Engine

QL 3D GAME ENGINE

2012

OCT NOV

The Magazine

For all things QL related since 1984

Information on the Association

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library. There are active national subgroups. Details are given in the Member's Guide and in this magazine.

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EDITORIAL   Lee Privett

Well another year is rapidly coming to a close, and while the weather in its ever increasing unpredictability plays havoc with sudden temperature changes and floods up and down the country, thoughts turn to next year and 2013. Let's assume the Mayan prophesy turns out not to be true and we all see the new year in, then what do you want to see in the magazine throughout the coming year?

Least not forget that 1984 saw Thomas the Tank Engine making its debut with Ringo Starr narrating and Peter Davison ended his stint as Dr Who. Sadly Eric Morecombe passed away, my favourite films of the year were Beverley Hills Cop and Ghostbusters, The AIDS virus is discovered and Band Aid released 'Do they know it's Christmas'. the Apple MAC made its appearance and oh yes the Sinclair QL and Issue 1 of the QUANTA Magazine hit the UK scene.

As ever any contributions are welcome, any projects you are working on we would love to hear about. Lastly there is a hive of activity around licence changes for SMSQE coming through the QL grapevine so watch this space.

QUANTA NEWS   Dilwyn Jones

f you have QL-related news items that you'd like us to include on this page, please get in touch with News Editor - Dilwyn Jones at **news@quanta.org.uk**

3D Game Engine For QL

Back in September, François Lanciault (who gave us the Black Knight chess game for QL) wrote:

After many years of trying unsuccessfully to have fun writing software for other computers, I recently realized that I missed writing QL programs, especially 68000 assembly. I know that to maximize my motivation a project has to be challenging, as writing a chess program from scratch for the QL (Blackknight) was many years ago.

So here is my project: I am currently writing a game for the QL. The game will be a fast paced 3D wireframe of the type "shoot everything you can as fast as possible or else you will crash onto it" I decided the game has to be fast and challenging, the graphics smooth and colourful. I also wanted to include some nice presentation screens using high colour modes and maybe some kind of film sequence between the different levels.

That was a month ago. I did not want to talk about it too soon because I was not sure it would be possible to achieve that kind of performance on a QL. But now I think I can do it. As of today, the complete 3D engine is written and is performing well. It is a real 3D engine, not a pseudo 3D. You can navigate around in any direction, the object can have any shape and any movement, etc. It does take a lot of processing power from the QL, so I don't think a bare QL will be able to handle it but I am hoping that a GoldCard will be enough.

For the moment the engine can achieve between 20 and 30 frames per second, depending of the complexity of the scene, running on a SuperGoldCard.

The game will support the following system / graphics in its first iteration

Standard QL mode 4 : very little flickering, 4 colours only, good performance in fps
Standard QL mode 8 : very little flickering, 8 colours, fat ugly dots, best performance in fps

Minerva QL mode 4 : No flickering, 4 colours only, good performance in fps

Minerva QL mode 8 : No flickering, 8 colours, fat ugly dots, best performance in fps

Minerva QL mode 4 : Lots of flickering, 10 colours, bad performance in fps

Minerva QL mode 8 : Lots of flickering, 27 colours, fat ugly but colourful dots, bad performance in fps

Aurora QL mode 16 : little flickering, 16 colours, sharp graphics, worst performance in fps

I don't think I will do an Aurora 256 colours version. Not because it is difficult, but because it is really going to be too slow.

As I don't have a Q40 or QPCII, I am not doing anything to support their additional graphic modes, but maybe sometime in the future I will look into that too.

Feel free to ask any question, any word of encouragement is also welcome !

JUST WORDS! WEB CHANGES

Just Words! have redesigned the dictionaries page on their website.

You can now download the word lists as either QTYP or plain text files.

Just Words! had been surprised by the number of hits on a highly specialised QL page and suspect some people were looking for text lists.

www.gwicks.net/justwords.html

Plans for QL 2013

Jochen Merz writes:

It seems that the article in the last issue of QL Today has triggered something for next year. The venue this time will be Hamburg, a nice city and worth visiting if you have not been there yet. And if you have, worth another visit too, as the address will be "Reeperbahn 1" (famous!) - the entry to St. Pauli.

Rainer Wolkwitz offered a conference room for the meeting for up to 200 people in den "Tanzenden Türmen"/STRABAG ... and he says it will have a beautiful view over Hamburg and its port (only 10 minutes walking distance from there). The towers are quite interesting to look at, especially if you stay in front of them. Here, for example, are some pictures:
http://www.strabag-real-estate.com/databases/internet/_public/
content.nsf/web/DE-STRABAGREAL.COM-PROJEKTE-B%C3%
9CRO-Tanzende%20T%C3%BCrme,%20Hamburg#?
men1=2&men2=undefined&sid=232&h=2

QUANTA Magazine

We thought that the date for the meeting should avoid the holiday season and major events in Hamburg, to increase chances for reasonable hotel rates. We found that the following dates are probably the best ones, chances for good weather, chances for less traffic, chances for affordable hotels:

a) Weekend 18th/19th of May
b) Weekend 25th/26th of May
c) Weekend 1st/2nd of June
d) Weekend 31st of August/1st of September

So, we should start working out which date suites most of you best, and if you prefer the Saturday or the Sunday to be the "meeting" date. Assuming, that a visit to Hamburg will not just be for a QL meeting, other activities like site seeing or shopping can easily be placed around the meeting.

A note for visitors from outside Germany: shops are closed on Sunday, but there are loads of other things to do, visiting the harbour and various ships, or cruise through the harbour, musicals, Zoo Hagenbeck, all sorts of museums or the famous Miniature Wunderland (the world's largest miniature train exhibition).

Please let us know if there is any interest, and what would be your preferred date and day. Please send an email to SMSQ@J-M-S.com, subject "QL2013" and the letters for your TWO preferred dates (a,b,c,d) and whether you prefer Saturday or Sunday, or no preference. Also, help would be most welcome - Rainer said he does not have too much time to care for other

things like hotels. He can provide technical equipment which could be required for talks or demonstrations (hint, hint!), like a large screen or projector and internet, of course.

Please reply a.s.a.p. so that we can start working on the details. For dates in May, only half a year is left, which is 2 issues of QL Today in between for a poll of the preferred date and advertising for the event. We may not be able to fill the room with 200 people, but after having had several meetings in the South, this is very North and a chance to meet people we have not seen for many years!
And - Hamburg is worth visiting and seeing anyway!

Rockfall Game Re-Released
Andy Toone wrote this colourful Boulderdash style game originally for CGH Services back in the 1980s and in a recent email to Rich Mellor he gave permission for the game to be re-released as Freeware.

I have made it available for download in two versions, one for QemuLator which can be run direct from the zip file by linking the zip file to one of the QemuLator drive slots. The zip file contains a BOOT program which should allow it to start automatically from the zip file when the emulation is started.

A second version without QemuLator file headers, which prevented it running on other QL systems. Note that although it seemed to run fine on Minerva ROM with QemuLator, I was not able to get it to run in SMSQ/E on QPC2.

In the game, you have to move around through the dirt collecting diamonds while avoiding falling boulders and monsters which chase you. Good luck, QL game players!

Download this game from :

http://www.dilwyn.me.uk/games/index.html

Sample screen from Rockfall

MandelSpeed Re-Released

Also written by Andy Toone, Mandelspeed is a Mandelbrot graphics plot tool. This is also re-released as freeware and comes in separate versions for both QemuLator and other QL systems as described above.

Download both versions from this page:

http://www.dilwyn.me.uk/graphics/index.html
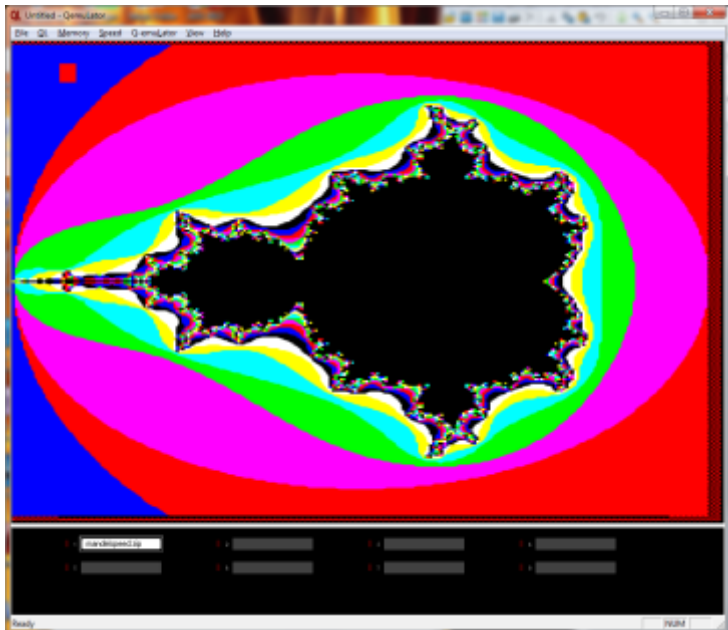
CGH Magazines Can Also Be Re-Released

Rich Mellor has managed to make contact with Richard Alexander, formerly of QL software house CGH Services.

Richard has given his blessing to re-release copies of the magazines he produced back then, including the QL Adventurers Forum, QL Leisure Review and QL Technical Review. These have already been scanned by Peter Scott (of QL Forum fame, where he appears under the name vanpeebles) and Peter is now aiming to convert the scans to PDFs so that these valuable early QL resources can be made available once more.

PCB Design Update

Malcolm Lear has released a further update to his PCB designs software. Version 7.25 updates include, according to Malcolm: "The biggest improvement with this version is the editing and viewing of the NC drill sizes. 'h' toggles the screen view on/off and 'Ctrl h' starts up a drill editor."

Download this latest update from the Graphics page on my website at

http://www.dilwyn.me.uk/
graphics/index.html

CGH Magazines update

Just before publication we heard from Peter Scott that he has put the first of these magazines online:

With kind permission from Richard Alexander, the man behind the QL Adventures' Forum magazine, I have uploaded some scans of the magazine here:

http://www.northwestlinux.net/~qlforum/

SMSQ/E License

SMSQ/E Registrar Wolgang Lenerz has let us know that the SMSQE licence will be changed.

From the current SMSQE licence, we will move towards a (new) BSD style licence, which essentially means that anyone can do with the source code anything he/she likes, and also distribute the compiled code.

Many have called for such a change in recent years – quite how it will affect future development and support for SMSQ/E remains to be seen, although this News Editor is cautiously optimistic. Q40 designer Peter Graf, for example, has long campaigned for a loosening of the licensing conditions for SMSQ/E and it may also perhaps benefit Wolfgang's own SMSQmulator project (an SMSQ/E based emulator to run in a Java Virtual Machine).

GC QL Mouse Project

Gianni Carugno has released a project to build a mouse system for the QL. The 'GC' in the project name refers to his own initials rather than Gold Card as I mistakenly thought originally.

The set of PDF files contain circuit diagram, parts list, PCB layout, adaptor lead details, firmware etc for building this project, which interfaces a PS/2 style mouse to a QL CTL port to emulate cursor
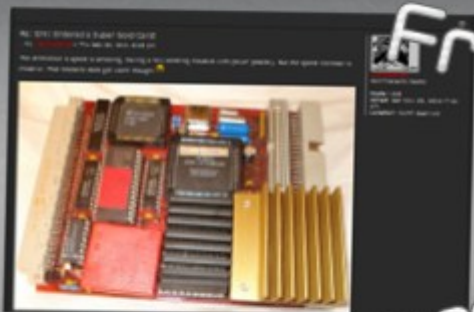
key presses, like a QL joystick. This project is completely free to download. The author says that although a USB style PS/2 mouse can be used (usually one supplied with a PS/2 to USB adaptor) a purely USB mouse may not work. Gianni says that power may be taken from the QL EPROM slot (see the picture below) or via a low power PSU if you prefer.

Download it from the Hardware Docs page on my website at:
http://www.dilwyn.me.uk/docs/hardware/index.html

GC QL Mouse

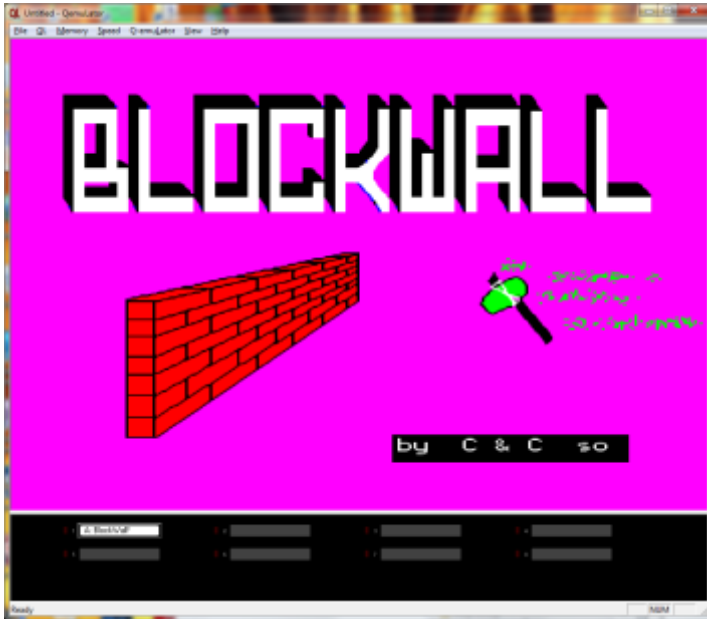### BlockWall Game

Gianni has also been busy writing a Breakout-style game called BlockWall. He says it is his first QL game written in the Pascal language.

The game runs QemuLator but it is best to set the emulator to run at QL speed if it is used on a fast computer. BlockWall is available to download from the Games page on my website:
http://www.dilwyn.me.uk/games/index.html

BlockWall game

Italian Psions

To add to the British, American and German versions of QL Quill, Archive, Abacus and Archive already on my website, there are now Italian versions available too. Download version 2.23 of them from:

http://www.dilwyn.me.uk/psions/index.html

QUANTA Finances in the 21st Century   John Gilpin

Since I became QUANTA Treasurer at the A.G.M.in April 2002, my aim has been to reduce the annual losses reported by QUANTA in its Annual Financial Report over a number of years. It was seen very early on that unless QUANTA reduced its expenditure, then its income was not going to be able to maintain the Accumulated fund at or around its 2001 balance of £15,674.

Although various measures were introduced to reduce the outgoings of QUANTA, the Accumulated fund continued to fall as the following Table indicates:

YEAR	PROFIT / (LOSS)	ACCUMULATED FUND.
2002	(£708)	£15674
2003	£1363	
2004	(£306)	
2005	(£2890)	
2006	(£618)	
2007	(£66)	
2008	£148	

2009   (£3050)
2010   (£516)
2011   (£750)   £8181

Indeed, looking at the above one could rightly argue that during my term of office, despite all the loss reducing measures introduced, I am responsible for a total loss of £7483 from the QUANTA Accumulated Fund. My counter-argument to this says that without some expenditure then QUANTA would not have existed at all, and I fully endorsed the two largest year's expenditure for the "QL is 21" and "QL is 25" Workshops and Celebrations. (in 2005 and 2009 respectively). I was very pleased to report that both these events ran well within budget.

When all efforts to reduce expenditure have failed, the only move forward is to increase income.

The QUANTA Constitution, in clause 4.0, states "…membership shall be open to anyone with an interest in the QL on payment of an annual subscription the amount of which shall be determined by the members in General Meeting." I, therefore, set a proposal to the members at the Annual General Meeting in 2011 that the annual QUANTA subscription should be increased from the then current £14.00 to £18.00 for all full members (irrespective of where they reside) and that those members wishing to take the QUANTA magazine in its A5 printed booklet format should be asked to pay the second class postage to their nominated home address, the alternative to this would be to receive a medium resolution colour magazine in .pdf format emailed to their

nominated email address, free of charge.

One of the arguments I used for this proposal was that the author of the original QUANTA Constitution failed to safeguard against inflation regarding subscriptions and while QUANTA has always been a "Not for Profit" association, no plans were put in motion for QUANTA to manufacture and sell items to raise some income to stabilise the accumulated fund against times when Income from subscriptions fell below the necessary expenses of the Association.

A quick calculation shows that if an annual inflation rate of 1% were applied to the £14.00 Subscription in 1984, then by the AGM in 2011, Subscriptions would be approximately £17.25 (a 23% increase) and if the inflation rate had been increased to 2% per annum, then subs would be £21.20 (a 51% increase)

However all this is water under the bridge, so to speak and although we are not anticipating a great increase in 2012, and we are anticipating a drop in membership numbers, only time will tell if we have made the correct choice and whether we made it early enough.

There are a number of members who are obviously taking absolutely no notice of the changes approved by their fellow members present at the 2011 A.G.M. or to all the letters which Keith Dunbar and myself have sent to all members informing them of the new Membership Fee (The sum of the Subscription and the Postage Levy – where appropriate) and are continuing to pay by

an old bank Standing Order on all sorts of dates (we have dropped the July Subscription date and now offer only a January date in order to simplify the subscription payment and reminder schedules). Those members concerned will receive a concise letter asking them to look at the new available methods of payment if they wish to remain members of QUANTA. Those members who do not receive a letter are in the clear for the time being and will receive and should respond to the "Subs Due" Notice which will be posted to them with the October/November issue of the Magazine.

After receiving so many payments during the last eighteen months or so which do not relate to any of the new membership rates, your committee have asked me to notify all members that after 01/01/2013 any sundry amount received will be treated as a donation to QUANTA with our thanks.

We are asking the recipients of our current letters to use the back of the letter to return any comments to us and if we feel that we can improve on our subscription services, we will endeavour to do so.

MARCH 1984   Lee Privett

n an occasional look back at the QL's history, we briefly comment on the publications that were about and summarise what was seen at the time. For 50p, yes 50p March 1984 saw a 16 page QL.USER (incorporating Professional Computing) magazine supplement. Published by EMAP and copyright held by QL USER 1984 and edited by Simon Craven, the magazine was one of the earliest to be seen covering the Sinclair QL Computer.

QUANTA Magazine

The contents page covered the topics of "In Touch, The QL in Brief, SuperBASIC, QDOS (getting £2500 into £400) and the jargon busting 'Confused'. The articles in this magazine covered mainly speculation as it seemed much of what they referred to was based on not actually seeing or having the machine but from the specs and marketing materials. However there were tantalising bits for the ever eager fans on Sinclair products regarding the software, the buyers checklist and some of the SuperBASIC words and their meanings.

Advertising was present in this contender for space on the magazine shelves, Of the two entries Education Computing (another magazine) and a computer game called Up Periscope from Beyond, written by Ron Potkin this was a strategy game involving submarines.

One final interesting point is the news section "In Touch" which refers to a rival to the QL coming from America. The machine named "Lorraine" was shown at a recent electronics show in Las Vegas, stores its data on floppy disk and is priced under $1000, developed by the then joystick manufacturer AMIGA CORP, hmmm.

If you have something to say or want to make a comment on this or any subject, then email: *editor@quanta.org.uk*

The cover is not ready yet – but most of the inner bits of the forthcoming issue are layed out already: 38 pages so far! Still time to subscribe (you will get issue 1 as well, of course) and still time to renew!

www.QLToday.com

QL Today Volume 17

We at QL Today are now in our 16th year and the 17th is coming up soon! The issue 1 of Volume 16 came with a DVD (included in the price) containing all previous issues of QL Today in PDF format - from Volume 1 to Volume 15, English and German (as long as German ones were produced). We ask for early renewals as this allows us to plan ahead. We are thinking about about another "goodie" next volume, but this also depends on the renewal situation. Saving on sending out reminders gives us extra pages to add to the magazine.

You can subscribe by using this form (or a copy of it), or subscribe online via www.QLToday.com (the form can be downloaded), by email, letter, fax etc. ... we are flexible!

I hereby subscribe to **QL *Today*** for **4 issues of Volume 17. The total price for all four issues** is as follows, including postage and packing (depending on destination)

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Please fill in and send to Jochen Merz Software, Kaiser-Wilh-Str. 302, 47169 Duisburg, Germany.
or Fax to +49 203 501517 or scan & Email to SMSQ@J-M-S.com

QUANTA HELPLINE   Dilwyn Jones

Members wishing to submit helpline requests via email can use the email address helpline@quanta.org.uk or if you prefer to use traditional post, please send the helpline request to me via the address printed inside the front cover of the newsletter.

Obviously, we cannot guarantee to answer every query we receive, but we will do our best! Where we have been unable to answer the queries, we may print the help request as an open request in the Magazine to ask if any of the readers can come up with a solution. And, of course, if readers feel that they have a better solution than we came up with, or would like to correct any errors we make, please write to us!

I apologise for not being able to take telephone help requests these days as the queries are too general, verbal information too vague and the calls too long at inconvenient times while I am working such long hours as I currently am.

I am devoting this issue's helpline to questions about QemuLator. For anyone who hasn't heard of it before, this is a QDOS emulator which comes in two flavours, one for Windows PCs and the other for Mac OS X computers. The article is a mix of questions from members and questions derived from my own use of this emulator. My experience of QemuLator is restricted to the Windows version, whereas our esteemed Editor uses the Mac version, so you may

find he adds his own answers where differences exist between Mac and Windows versions.

Q. I can't get Q-emuLator to read QXL.WIN files. What's wrong with it?

A. Depends on whether or not the emulator is a registered version or not. The unregistered version cannot handle QXL.WIN files.

If you have never heard of a QXL.WIN before it is a method of storing QL files within one massive file on the host filing system. On a Windows computer a QXL.WIN is a single large Windows file containing all of your QL files for the emulator, a kind of 'container' if you like. A QXL.WIN usually has the filename QXL.WIN, although some emulators can vary the name.

The other possible problem, as I found to my own cost some time ago, is the size of a QXL.WIN file. If over about 800MB (as mine was) QXL.WIN files cannot be handled by Q-emuLator. This is a bit extreme, though, as most QXL.WIN files won't be this large – the emulator allows for QXL.WIN large enough to fill a CD-ROM, which is useful as most QL CD-ROMs are published as QXL.WIN types.

Q. What is the difference between a QXL>WIN and a QXL.WIN

A. None whatsoever! Note that on most English keyboards the '>' symbol is on the same key as the '.' Key, so it is simply a mis-typed filename! In theory, on a Windows system the '>' symbol is

an illegal character in a filename, so if you do actually come across a QXL>WIN you ought to be quite proud as you have managed to achieve something quite hard to do! It should work perfectly fine if you use Windows to rename it to a conventional QXL.WIN.

Q. My QemuLator is set up to save its files in a Windows folder, but it would be useful to be able to make it handle QXL.WIN files as well – how do I do this?

A. Simply attach it to one of the eight drive slots available to QemuLator. Click on a drive slot and when the menu appears click on the "QXL hard disk file…" option, then browse the hard disk to find the QXL.WIN which was probably created by a QXL card or QPC2 emulator, although uQLx can access QXL.WINs as well). Note that QemuLator can neither create QXL.WIN files nor create directories within them. The QemuLator manual states:

"You can read and modify existing QXL.WIN files, but creating new ones is not supported, yet. However, some free tools (wxqt2 and qxltools) are available on the Internet (http://www.daria.co.uk/) that will provide you with that capability."

Q. How do I transfer my QL software from microdrive cartridge to QemuLator?

A. The easiest way is via floppy disc. On a QL, copy the files from the microdrives to the floppy disc in the usual way, then take the floppy disc over to the PC (if the PC doesn't have a floppy disc drive, you can always get fairly cheap USB drives for PCs which work just like the floppy disc drives built into older PCs) and use it in the usual way.

Where the microdrive cartridges have a copy-protection mechanism, a program called mdump_exe (available to download from the QemuLator website at http://www.terdina.net/ql/software.html according to the manual, although I wasn't able to find it there when I looked) can be used – see paragraph 4.6 of the QemuLator manual.

Another useful tool is a program called MdvToWin_exe supplied with QemuLator in the Software\FileUtil folder. According to the QemuLator manual it "can be used on a QL to copy a file from a copy-protected microdrive to floppy disk and attach to it special microdrive information used by some QL programs to verify the authenticity of the microdrive."

Q. I have heard talk of QLPAK files. What are these and how do I use them?
A. Essentially, these are like ZIP files, where all the QL files for a particular program are packed into one archive. The QLPAK file contains a QL program together with the emulator settings needed to run it. You can see how powerful the facility is by going to the QemuLator website's software page and scroll down to find a QLPAK program such as the Psion Chess example on the page. Click on the link to Psion Chess 1.0 and after a short pause while it downloads, Windows will ask if you want to save or run the file. Choose Run and Windows will then start QemuLator and shortly you'll see the familiar F1/F2 choice QL screen. Press one of these and Psion Chess starts up. It will ask you to put the master cartridge in one of the QL drives, but ignore this prompt and press

SPACE and the chess program should start. In effect, what you have done is run QL software direct from a website – no other QL emulator can do this as far as I know (apart from the Mac version of QemuLator).

Q. Zip and Unzip don't work on QemuLator.

A. Oh yes they do, but only as long as there is enough free memory available. Zip and Unzip may need to create temporary files in a ramdisc as well as copies of the zipped and unzipped files, so memory required can be pretty large and may be beyond what is possible with the limited memory available on the unregistered version of QemuLator unless the zip files are pretty small in size. Do bear in mind that on the registered QemuLator, it is possible to directly mount a zipped file as a drive in itself and copy files from the zip file as though it were a drive in its own right (in essence QemuLator has zipfile compatibility built in, although it only works on the registered emulator).

Q. Is it possible for software to tell if it's running on QemuLator?

A. Since the SMSQ/E extensions such as MACHINE and PROCESSOR don't directly identify QemuLator, it is necessary to test directly using a trap call specific to QemuLator according to the author. This has to be done by machine code unless someone is willing to write a BASIC extension to do this! Call Trap #1 with D0.L = -26 to get emulator information. In systems where the trap is not implemented you will get a negative error value in D0, or on QemuLator it'll be a value of 0.

If called with D1.L = 1, the trap returns information in D1.L with information about the host operating system:

D1.L = $00aabbcc

    aa = host operating system:

        0=Windows, 1=Mac OS

    bb = host operating system variant, currently always 0 but

          in future might allow Unix flavour to be specified

    cc = emulator ID (1=Qemulator)

Returns in D2.L the version of the emulator:

D2.L = $xxyyzzww, where

    xx = major version number

    yy = middle version number

    zz = minor version number

ww was supposed to be a global incremental number, but a 0-255 range is probably too little, so you can just ignore it.

D3.L = type of build

  0 = alpha

  1 = beta

  2 = release

For example,

  D2.L = $02010005 and D3.L = 2 means version 2.1

  D2.L = $01030218 and D3.L = 1 means version 1.3.2b

D1.L = 2

RWAP Software

We have been working hard to safeguard the future of the Sinclair QL through creating an online QL Wiki backed by a repository of QL titles.

The QL Wiki enables people to see what software and hardware was produced for the Sinclair QL. The repository enables people to purchase working copies when their microdrive cartridges fail, or they move onto disks or emulators. Where we can, we obtain permission from the copyright holders to re-release items on the market.

This has enabled us to bring some of the titles back to the market as well as re-kindle interest in the Sinclair QL and its emulators.

Old favourites brought back to life include:
E.V.A., Vroom
Black Knight, Double Block
Jungle Eddi, The Lost Pharaoh
Pengi, the Lonely Joker
Microdeal's Flight Simulator, QL Hopper, The King,
Night Nurse and Cuthbert in Space
Mortville Manor, Darkside of the Moon (£10)

We still retain our existing catalogue, including:
Open Golf, Return to Eden,
Stone Raider II, The Prawn,
Hoverzone, Lost Kingdom of Zkul,
Deathstrike, Horrorday,
Flightdeck and QWord

All games are available on disk or for use with Q-emuLator on the PC from ONLY £5 each.

Microdrive versions also available - from £10 each.
Memory / system limits may apply - please check before ordering.

Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:
www.rwapadventures.com/ql_wiki

RWAP Software
3 Dale View Court, Fulford, Stoke-on-Trent
Staffordshire ST11 9BA
Tel: 01782 398143
Email: rich@rwapservices.co.uk

Website:
www.rwapsoftware.co.uk   or   www.sellmyretro.com

Vroom by Pyramide

E.V.A by Westway

Mortville Manor by Pyramide
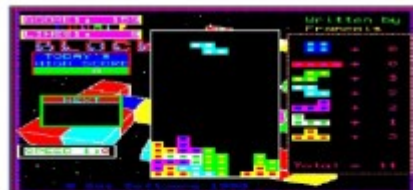
Double Block by Francois Lanciault

Night Nurse by Microdeal

A1.L = pointer to memory buffer
D2.L = length of buffer

Fills the buffer with a short QL string identifying the emulator
(for example "Q-emuLator 2.2").

Returns a buffer full error in D0 if the buffer is smaller than the
string (and the buffer content is not valid in this case).

Now all we need is for someone to write a small set of extensions
to perform the above from BASIC (any volunteers?).

**Q. I am having difficulty getting the 256 colour mode working.
It says to use the Gold Card version of SMSQ/E, which I have
for my QL and Gold Card, but no matter what I try I can't get it
to work.**
A. To support the 256 colour mode you need a special version of
the Gold Card SMSQ/E with inbuilt drivers for the Aurora card's
256 colour display mode. The standard QL +Gold Card version
doesn't support the extra colours. The Aurora version has never
really been advertised – it was developed by Marcel Kilgus
specially for the Aurora card and to get hold of it you will need to
contact him direct (or possibly Jochen Merz).

Once you have this version, put it in one of QemuLator's drives
and enable the 256 colour mode in the QL configuration part of
QemuLator – go into the 'QL' menu, then the 'QL Configuration'

option, 'Graphics' tab and in the Additional Video Card selection, choose 'Aurora' option.

Not all possible resolutions will work – experiment a little to find the best for your systems. Sometimes you may find that it will only run in full screen, not windowed mode. Some resolutions will be 'scaled' meaning it doesn't look very pretty on the PC display.

You will notice that this drop-down menu has a Q60 option. Don't be fooled into thinking you can get Q60 displays by running Q60 SMSQ/E – it is not intended for that. It was included to allow Peter Graf to develop his QLPUI operating system, a taster of which is available as a QLPAK file from the QemuLator website's Software page.

Q. When I tried to download the Windows version of QemuLator, it asked if I wanted to run a file called qemulator.msi . I expected a zipped file or possibly an executable. Is it safe to accept this?
A. An MSI file is a Microsoft Installer or Windows installer file. It contains the information needed to install QemuLator. It is as safe to run and install this file as any other Windows file!

Q. I'd like to have an unregistered copy of QemuLator on my PC system for testing programs I write as well as the registered version for everyday use. Is it possible? If I try to install a second copy both seem to be the same version.
A. QemuLator puts registration information in the Windows system registry. So both copies will find the same status information.

Rather than try to work around this it is easier to make sure you have your registration information to hand and use the Unregister option from the 'Q-emuLator' menu when you want to test something on an unregistered emulator. Using 'Unregister' does not invalidate your registration code – it can be reused later to 're-register' your copy when you want to return to the registered version.

Q. I'd like to put a copy of QemuLator on a CD or pen drive to use on other computers – is this possible?
A. There are two or three issues to consider when doing this, none of which are insurmountable.

Firstly, beware of trying to run it from a read-only medium such as a CD. You may run into problems if the emulator tries to write to the medium from which it ran.

The second issue is the registration code. This is held in the Windows Registry on the computer on which the emulator runs. This means that if you copy the installed files onto a CD and then try to run it on a second computer, you'll need the registration code to re-register it on that second PC, otherwise it'll appear to be an unregistered version. After you have finished running the emulator on that second PC remember to Unregister it to remove the registration information from that PC

Thirdly, you will not be able to predict which drive letter a second PC will assign to the CD drive and USB pen drives. QemuLator stores the filenames in its configuration files as absolute path

names, so you may need to manually edit the .QCF file (usually called default.qcf) and change any absolute path names into relative ones. Most plain text editors, including Windows Notepad, can be used to edit a '.qcf' file although you need to be very careful not to damage the content of any line in the file as it may cause unpredictable side effects.

For example, if your drive 1 slot is assigned to a QXL.WIN the .qcf file might have a line like this:

Slot1=QXL:D:\QXL.WIN

This means that drive slot 1 is a QXL type of file, with path and filename D:\QXL.WIN

Assuming you have a copy of QXL.WIN on the same CD or USB pen drive (called thumb drives in some countries) you may not be able to predict if the CD drive is drive D: or drive E: or whatever on the second PC. The solution is to leave out the path name, so QemuLator will look for it on the same drive as it ran from, so we need to change that line to:

Slot1=QXL:QXL.WIN

And of course do the same for anything else where the absolute path names are used.

Q. I copied some program files from QemuLator via Windows to run them on my QL. They would not run and gave error

messages. Why?

A. As Windows filing systems do not understand executable QL program file headers, it strips them from QL program files and so these become missing when transferred to a QL and executed, hence the error messages when you try to run them on a QL.

In order to preserve file headers, QemuLator adds information to some QL files to allow the headers to be preserved, despite the worst efforts of Windows. This can sometimes get in the way since this extra information in a file can now be preserved when copied in Windows, and may get in the way is the file is transferred to a QL via Windows. The answer is to copy it within QemuLator to a floppy disc, for example, where the copying adds or removes this extra information automatically and invisibly to the user depending on whether the medium concerned requires it. This means that if you copy files from a QemuLator Windows directory to QDOS floppy disc, for example, the extra information is stripped and it reverts to a normal QL format file. Two programs are supplied for manually converting files, called QLToWin_exe and WinToQL_exe. If you have a look at Appendix 2 of the QemuLator manual, it documents the information added there (an extra 30 or 44 bytes added to a file).

Q. BEEP doesn't work on the emulator.

A. There is an option to turn it off or on in the 'QL' menu. Select the QL menu, then in the drop down menu, ensure there is a tick against SOUND.

There is an enhanced sound option in more recent versions of

QemuLator, compatible with the QLSSS (QL Sampled Sound System) available for other QL emulators. Simon Goodwin's sound device drivers let you play back System) available for other QL emulators and Q40/Q60 computers. Simon Goodwin's sound device drivers let you play back 20kHz sound sample files. The basic files required are included with QemuLator – look in the QL Software folder of the emulator installation, then in the QLSSS folder where you will find a binary file with the required drivers and a text file describing it. The QLSSS also needs to be enabled in the Devices tab of the QL Configuration window.

The full version of the QLSSS system can be downloaded from several QL websites, including the Sound page of my website at http://www.dilwyn.me.uk/sound/index.html .

Q. QemuLator is supplied with versions JS and Minerva ROMs. Can it use other versions of the QL ROMs? That would be handy for testing that programs I write can run on all these ROM versions.

A. Yes indeed it can and this is a very useful facility for software authors. It can even run many enhanced and non-standard ROMs. Plenty of ROM versions are available to download from http:// www.dilwyn.me.uk/qlrom/index.html - just unzip them and add them to the QL ROMs folder within the QemuLator installation directory. There is a list in Appendix 4 of the QemuLator manual of which versions of the QL ROM are supported.

Q. QemuLator runs some games way too fast on my PC.

A. On a modern computer, QemuLator can run much faster than an original QL and older QL games in particular have no speed control built in, they just run as fast as the hardware allows them to (running too fast was never a problem with an original Sinclair QL!).

There is an option in the Speed menu to allow the emulator to run at standard QL speed, Gold Card speed or full speed. Just go to the Speed menu and select 'Original QL' In most cases this will slow down the emulator enough for the game to be playable.

Q. The settings in my configuration file are ignored. I saved it as untitled.qcf as it offered by default.

A. In fact, the default configuration file loaded at start-up is called default.qcf so you should change the filename untitled.qcf to default.qcf. Other filenames can be manually loaded if you need

different settings for different tasks using the options in the File menu to 'Open Configuration'.

Q. I can't get the mouse to work – I'm using QemuLator on Windows and a JS ROM, and have installed the pointer environment yet it still won't allow the mouse to be used.

A. The Windows version of the emulator may need a file called MacMouse to be installed by your boot program. It's supplied with the emulator in the QL Software folder – just copy that to your QDOS folders and have your boot program install it JUST AFTER it installs the ptr_gen, wman and hot_rext files. Note that if you are running Gold Card SMSQ/E you do not need to install the MacMouse driver since QemuLator automatically adds equivalent drivers to SMSQ/E.

Q. QemuLator forgets any date/time settings I apply when I restart QemuLator.

A. In fact, every time it starts, QemuLator reads the PC clock. Any changes made to the QL clock don't extend to the PC clock, so any QL clock changes made apply only to the current emulation session and are 'forgotten' once the emulator stops.

Q. When printing, the last page doesn't get printed.

A. I used to have an old dot matrix printer which did this – it would not print a page until the end of the page had been reached. Usually, this meant adding a form feed at the end of the file, e.g. in the Postamble part of the Quill printer drivers. You can easily check if this is the case using a command such as this (change SER1 to PAR if using a parallel port to the printer):

OPEN #3,SER1 : PRINT #3,"Hello" : CLOSE #3

If this fails to print anything, try:
OPEN #3,SER1 : PRINT #3,"Hello"&CHR$(12); : CLOSE #3

If this cures the problem, you know that all printouts should be terminated with a form feed (CHR$ 12)

If you have a modern printer which does not support traditional printer control codes, you may need to enable the virtual printer mechanism in the QL Configuration window – instead of mapping the serial ports to the traditional PC COM1 to COM4 ports, map the serial port to 'Printer' instead, which will allow traditional Epson -style control codes to be converted automatically to print via the Windows printer driver instead.

There are some additional options for print quality and page fitting in the Printer Emulation option on the 'QL' menu. This also has an option to force printing of the last page (the End Current Page' option) where the print buffer contains an incomplete page, although incomplete pages should be printed automatically when the port is closed or the emulation is stopped.

QLPAK   Dilwyn Jones

A QLPAK is, as the name implies, a method of packaging QL software into one file so that it may be run quickly and simply using the QL emulator called QemuLator. The format of a QLPAK file is essentially a zipped file, containing the QL software and emulator settings so that as long

as you have a registered version of QemuLator on your computer you can download the software in QLPAK format and use it straight away without even having to unzip anything.

Indeed, if you visit the QemuLator website, you can click on links to QLPAK software such as a couple of sample games, and find that it can even start the copy of QemuLator on your computer and run the software immediately!

Example QLPAK games

QemuLator can of course use a zip file as though it was a microdrive or floppy disc drive just by attaching a zip file as one of its eight drive slots and I expect that many QemuLator users use this feature already - QLPAK takes things a step further and lets you include the emulator settings needed for the program as well.

For example, if a game needs a particular ROM version, or will only run in 128K RAM, you can specify this in the configuration file.

That configuration file has the same format as the ones which the emulator already uses - users may be familiar with saving configuration files with names such as DEFAULT.QCF to save the preferred settings for the emulator.

Daniele Terdina is the author of QemuLator. He responded to my request for information about QLPAKs and I have used the information he kindly gave as the basis for this article.

I quote here from his email, and have added some notes where I felt it clarified something.

These steps should be sufficient for most programs:

1. Copy the .QCF (ql configuration, specifying emulation options) file you want to use into the same directory as the QL program. To do this, just attach the directory containing the .QCF file to a QemuLator drive slot and copy it to wherever you have stored the remainder of the program to be made into a QLPAK.

2. You may need to edit the .QCF file with a text editor, for example to remove references to file paths on your machine. Don't associate anything to MDV slots, by default the QLPAK will be mounted as MDV1.

3. Zip all of the files together (including the .QCF file).

4. Rename the zipped file extension from .zip to .qlpak

5. Optional: if posting on a web page, associate the MIME type "application/x-qdos-qlpak" to the link - example below. This is what enables the browser to automatically start QemuLator when clicking on the link to a .QLPAK file. Hosting providers may sometimes disallow arbitrary MIME types by default, but there is usually a way to add new ones.

The above information is usually enough for most QLPAK files, but see also PAK: Drive Slots below.

For more complex cases, there are .QCF commands to perform operations such as: load a QL ROM image from the QLPAK mount different parts of the QLPAK to different microdrives specify an amount of memory, e.g. a game which will only run in 128K RAM.

More example QLPAK games

SUBGROUP MEETINGS

Sub group meetings are where QUANTA members and non-QUANTA members get together to discus, tinker and explore all things QL related. If there is a subgroup near you then why not pop along and see what's happening, you never know there may be something you could help with or a problem that you know the answer to. If there is not a sub-group near you why not hold one yourself? Contact the chairman on how to go about it, details on our contact page (pg. 2 Ed.)

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THE WEST MIDLANDS QL USER GROUP

The meeting place is called the Bull, the address is 1 Price Street, Birmingham, B4 6JU. It is approximately 7 minutes walk from Snow Hill main-line railway station and has ample street parking nearby. Meetings remain open to QUANTA members and non-members alike.

After your first meeting you're expected to pay £1 each time towards the organisation and monthly newsletter costs - except once a year when the group pays all those who attend, £1 instead.

We provide food twice a year for those who attend the AGM and the group's birthday party) and at meetings we discuss all sorts of things, QL-related and otherwise, usually from about 8:20pm onwards till 10:30 or later. The group owns QL hardware, a disk library and subscribes to relevant magazines. People can join the mailing list for £3.50 per year, even if they can't attend regularly.

Meetings: Meetings are usually on the first and third Monday of each month (but not on bank holidays unless the previous one was cancelled for that reason). Contact: The contact number remains Mike Bedford White's, on 0121 605 4438, anytime after 11am. Email: mikebwhite@blueyonder.co.uk

QUANTA DORSET SUBGROUP – Dorset

Meetings are held, on the second Sunday of each month between 2.00pm and 5.00pm. For location please contact: John Penn-Simkins - 01202 422491 or John Mason - 01425 275894

LONDON QL AND QUANTA GROUP

Meetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome. Members currently each pay a subscription of £40 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free.

Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc., available for purchase. Time: 2.00 pm. to 5.00 pm., on the second Sunday of the month. No meetings are held in December / January - winter break, or July / August –the summer break, giving 8 meetings a year. Malcolm Cadman 020 8691 5780
Email: QL@mcad.demon.co.uk

NEMQLUG - NORTH EAST MANCHESTER QL USER GROUP

Meetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway, which was Junction 7 M63 Motorway). Our informal meetings start at 7 p.m. and finish at 11 pm. All wel-

come. Meetings are on the last Thursday of each month (except December). John/Sarah Gilpin 0161 865 2872 (thegilpins@btinternet.com)

SCOTTISH QL USERS GROUP

QLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming, to get the location. Gdgqler@gmail.com

SOLENT SUBGROUP

Meetings are at Botley Market Hall, all welcome. Park at the back and use side entrance on the 1st Saturday of the month from 2.00 pm to 6.00 pm. Graham Evans 023 8040 3350.

SURREY QUANTA SUBGROUP (SQSG)

The group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please phone or email Ken Bain for the latest location. Meetings are 8.00 to 10.00 pm on the last Wednesday of each month except December. Ken Bain 01932 347432 (to midnight), kenb@bcs.org.uk

SUSSEX QL USER GROUP

Currently without a meeting place, anyone interested should contact Roy Wood 01273 430501 or Keith Mitchell - 01903 742263.

First of all we'll look at an example of a fairly simple game which only has two files - a BOOT file written in SuperBASIC and a single QL executable program called GAME_EXE. This game needs 640K of RAM to run, but there are no other special requirements. It does not matter if it needs to run from MDV or FLP devices, as QemuLator treats these as the same device by default.

So we create a directory somewhere in QemuLator to hold the files so that we can zip them up to prepare them to become QLPAKs. Say we have put them in RAM1_. We have saved a suitable .QCF file called GAME.QCF somewhere from QemuLator with the settings needed to run the game and have copied it to RAM1_.
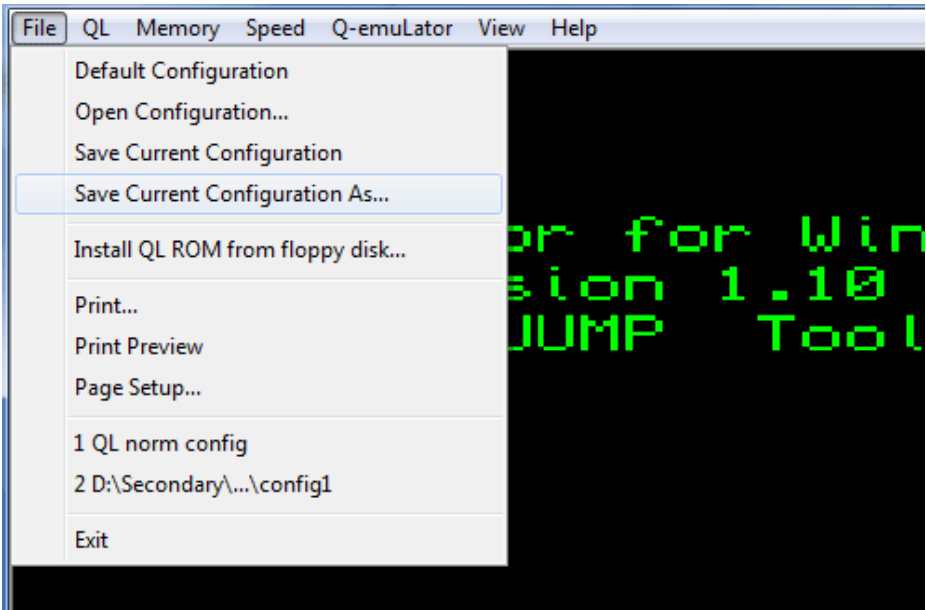
Saving the QCF file from within QemuLator

We now run the ZIP program (perhaps using Archivers Control Panel or Zip Manager or some such front end program for ZIP) and create a single zipped file called GAME.zip containing all three files. The last step to rename the zip file to a qlpak file as follows: RENAME "flp1_game.zip" TO "flp1_GAME.QLPAK"

The quotes around the filenames are needed in QDOS since QDOS doesn't allow unquoted filenames to include the period '.' character. Filename case does not matter. You can do the renaming on the host operating system instead, depending on how and where you zipped up the file.

If you need specific emulator settings such as a specific QL ROM version or a specific RAM size, you can tinker with the settings in the .QCF file if you know what the various lines mean. There is some information about this in the QemuLator manual (appendix 1) and here are some specific examples.

The .QCF file is a plain text file and so can be edited by hand in a text editor if you wish, and of course you can alter settings within QemuLator and save the current configuration ready made as a .QCF file by going to QemuLator's File menu, and using the "Save Current Configuration As..." command.

Specific Memory Size

In a text editor, load the .QCF file. If loading it from QemuLator's default home directory on its Windows home drive, this will be probably be in the Program Files\Qemulator directory on the C:\ drive. Look for a line which says something like:

    Ram=640K

This sets the amount of RAM available to QL programs as 640K. If, for example, you have an old game which will only run on a 128K RAM system you would need to change this to:

    Ram=128K

Alternatively if your program has a huge memory requirement such as a minimum of Gold Card sized memory, you could change this to:

    Ram=1920K

Ram can also be specified in megabytes using M in place of K, for example, Ram=4M to have the memory of a Super Gold Card.

Speed

Many old games had no real speed control and ran as fast as possible since the original QL was relatively slow for games. On modern fast QL compatible systems, these games may run too fast and become unplayable.

Emulator speed is controlled by a line which contains text like this:

    Speed=Full

To ensure the emulator runs at a similar speed to a real original QL, change the line to:

    Speed=QL

Or to make it run at Gold Card speed if the game is a bit sluggish at QL speed, try:

    Speed=GoldCard

QL ROM Version

If the program will only run on, say, a version JM or JS QL, or specifically needs an updated ROM such as Minerva, you need to alter the line which starts with 'MainRom='

For example:

MainRom=QL ROMs\QL_ROM_JS

This tells the emulator to start with the specified ROM image, in this case a ROM image with the filename 'QL_ROM_JS' contained in the directory called 'QL ROMs'.

For the QCF file included with the game, we could edit this to load the ROM image from the QLPAK itself. By default, QLPAKs are attached to drive slot 1 in the emulator, so assuming we need a version JM ROM image called JM_ROM to be loaded from the QLPAK attached to drive slot 1, we could use:

MainRom=Slot1:JM_ROM

PAK: Drive Slots

You may also need to tell the emulator that Slot1 is a QLPAK. Look for a line which starts with 'Slot1=' and change it if required to:

Slot1=PAK:

The other slots may be left as 'Slot2=Empty' etc. unless specifically needed.

Software Needs A Specific Back ROM

Some software may need Toolkit 2 or another EPROM which was plugged into the QL's EPROM expansion slot. Some early QL language compilers and interpreters needed a plug in EPROM to operate.

Suppose your game needs Toolkit 2 to run. Many QemuLator users will already have Toolkit 2 available on their system, but you cannot guarantee this.

Some users simply don't know a Toolkit 2 ROM image is supplied with current versions of QemuLator, some don't know how to implement it, and some just don't bother with it. So, assuming your software complies with the licensing requirements for Toolkit 2 ROM images (distributed on a non-profit basis for use with QL emulators) you may choose to include Toolkit 2 and tell QemuLator to use your Toolkit 2 ROM image called TK2_rom from the QLPAK.

This is what QemuLator's QCF definitions for Toolkit 2 would normally look like this:

    BackRom=QL ROMs\TK2_rom
    BackRomActive=Yes

So the .QCF file included with your game could change this to load the copy of Toolkit 2 from your own QLPAK file:

    BackRom=Slot1:TK2_rom
    BackRomActive=Yes

Auto-Starting The Software

QCF files contain some useful options controlling how the emulator starts up. For example, it is possible to auto-start without having to press the usual F1 or F2 keys of a "real" QL.

    FastStartup=No
    AutoStartSession=No
    FirstKey=None

Changing the first line to FastStartup=Yes makes the emulator skip the initial QL memory test, to make the emulator start a bit faster than it might otherwise when emulating the QL startup memory test and tweed screen.

The AutoStartSession line selects whether or not to launch the emulation session when QemuLator starts, in other words, whether or not you need to click on the picture of the QL keyboard or click the command 'Start' in the 'QL' menu, FirstKey controls which key if any is pressed automatically when the QL displays the F1/F2 startup option. This can be None, F1, or F2. Minerva may also allow F3 or F4 for additional special startup options.

By now you should be able to appreciate the possibilities. Remember that Appendix 1 of the QemuLator manual describes the format of these .QCF files and the options available.

Web Page Link To A QLPAK
In order to link to a QLPAK on a web page, you need to include code to associate the MIME type "application/x-qdos-qlpak" to the link. This fairly horrendous looking statement is actually quite simple to encode once you know how and have a few examples to hand. See how this is incorporated within the anchor (link) tag in this example which offers to download the qlpak from the same folder as the web page:

<A type = "application/x-qdos-qlpak" HREF = "game.qlpak">
Download my game</A>
This ensures that as long as a registered copy of QemuLator exists on the computer downloading the QLPAK, the emulator is started

up, the QLPAK file is associated with drive slot 1 by default and the emulator stars up with the settings specified within the QCF file. Windows, for example, will ask if you want to Run or Save the file at first, hopefully if you specify 'Run' the QLPAK will be associated with QemuLator which will be started and hopefully run the program according to the list of settings in the .QCF file.

Conclusion

This article reads like a highly technical document, but in fact once you have made the effort to create a QLPAK or two and seen how each permutation changes how the QLPAK is started and handled, you will find that this is an extremely useful facility, making it possible (to all intents and purposes) for QemuLator to run games direct from a web page!

All this is pretty new to me – it was only when Daniele Terdina supplied the basic information at the beginning of this article that I realised it would be fairly straightforward once I had the necessary information to implement this. Time permitting, I may try to make some of the games on my website available in QLPAK format to see how users respond.

You do need a registered version of QemuLator (costs $45.95 for Windows or Mac versions, or $55.95 for both, or $33.95 to update from earlier versions) on your computer to run QLPAKs of course, plus some knowledge of zip to create the QLPAK in the first place, but I think the work needed to learn how to use this facility makes it very worthwhile and above all a very convenient and underused facility.